

Application No.: 10/064,392

PATENT
Page 5 of 7

REMARKS

I. Status of the Application

Pending claims 1-13 stand rejected under 35 USC § 112, 2nd paragraph.

Applicant now cancels claims 5-7, 9-10, and 13 without prejudice. Independent claims 1 and 8 are amended without the introduction of new matter.

Applicant notes that the reference numerals in Fig. 13B require correction to conform to the number used in paragraphs [0146] and [0147], and requests permission to attend to this in the submission of the formal drawings.

Reconsideration of claims 1-4, 8, and 11-12 is respectfully requested in view of the foregoing amendments and following remarks.

II. Rejections under 35 USC § 112, 2nd paragraph

Independent claims 1 and 8 are amended to further comply with 35 USC § 112, 2nd paragraph, the amendments not being necessitated by any teaching of the prior art.

Claim 1 is directed to a method for detecting the presence of absence of activity of a bio/chemical species in the presence of a reactive constituent, an example of the process illustrated in Fig. 13A, and described in paragraphs [0144]-[0145]. Claim 1 is amended to recite first and second measurement probes positioned at respective first and second positions along a longitudinal transport axis of the diffusion channel, these features being previously presented in claim 7. Claim 1 is also amended to recite the process of detecting a diffusion response occurring along the longitudinal transport axis of the diffusion channel, the diffusion response being in the form of a differential measurement taken between the first and second measurement probes. This feature was presented in claim 7, as well as described in paragraph [0145].

Application No.: 10/064,392

PATENT
Page 6 of 7

Claim 1 is further amended to recite the process of correlating the measured diffusion response to a baseline diffusion response to determine the presence or absence of activity of the bio/chemical species in the presence of the reactive constituent. This feature is described in paragraph [0145]. By comparing the measured diffusion response with a baseline diffusion response (the baseline diffusion response defining the absence of bio/chemical species' activity in the presence of the reactive constituent in one embodiment), the presence or absence of activity of the bio/chemical species can be sensed.

Claim 8 is amended similarly to claim 1, and is directed to a method for monitoring the rate of activity of a bio/chemical species in the presence of a reactive constituent, an example of the process illustrated in Fig. 13B, and described in paragraphs [0146]-[0147]. In particular, claim 8 is presently amended to recite first and second measurement probes positioned at respective first and second positions along a longitudinal transport axis of the diffusion channel, these features being previously presented in claim 13. Claim 8 is further amended to recite the process of measuring a diffusion response occurring along the longitudinal transport axis of the diffusion channel, the diffusion response being in the form of a differential measurement taken between the first and second measurement probes and indicative of the bio/chemical species' rate of activity in the presence of the reactive constituent. This feature was presented in claim 13, as well as described in paragraph [0147].

Claim 8 is additionally amended to recite the process of correlating the measured diffusion response to a predefined baseline diffusion response to determine the rate of activity of the bio/chemical species in the presence of the reactive constituent. This feature is described in paragraph [0147]. By comparing the measured diffusion response with a baseline diffusion response (the baseline diffusion response defining no change in the rate of activity in the bio/chemical species in the presence of the reactive constituent in one embodiment), the relative rate of activity of the bio/chemical species can be determined.

Application No.: 10/064,392

PATENT
Page 7 of 7

Applicant submits that in view of the foregoing, independent claims 1 and 8 comply with 35 USC § 112, 2nd paragraph. Remaining claims 2-4 and 11-12 depend from independent claims 1, and 8, respectively, and accordingly, are in compliance with 35 USC § 112, 2nd paragraph.

Conclusion

The Applicant submits that the presently pending claims 1-4, 8, and 11-12 are patentable over the prior art, and accordingly request the issuance of a Notice of Allowance in due course. Should the Examiner believe that an interview would expedite prosecution of the case, a telephone call to the Applicant's representative is invited.

Respectfully submitted,



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